

7969-088

(SHEET 1 OF 11)

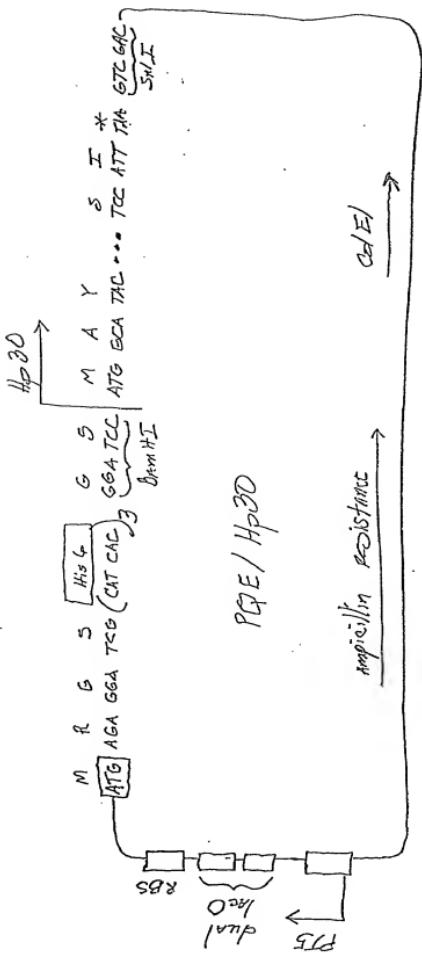


FIG. 1

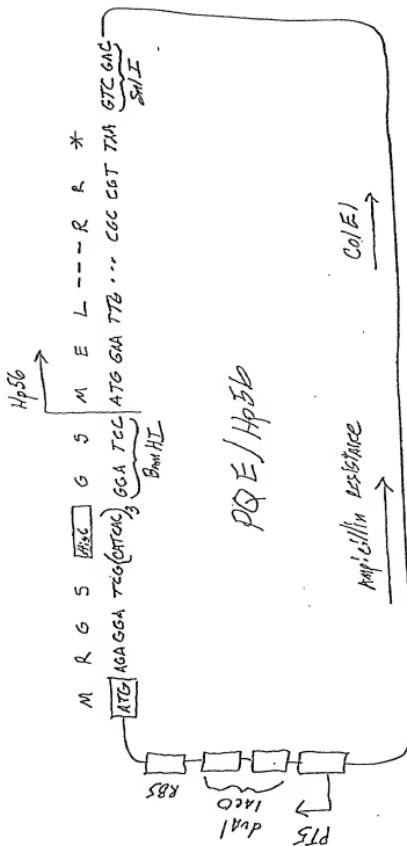


FIG. 2

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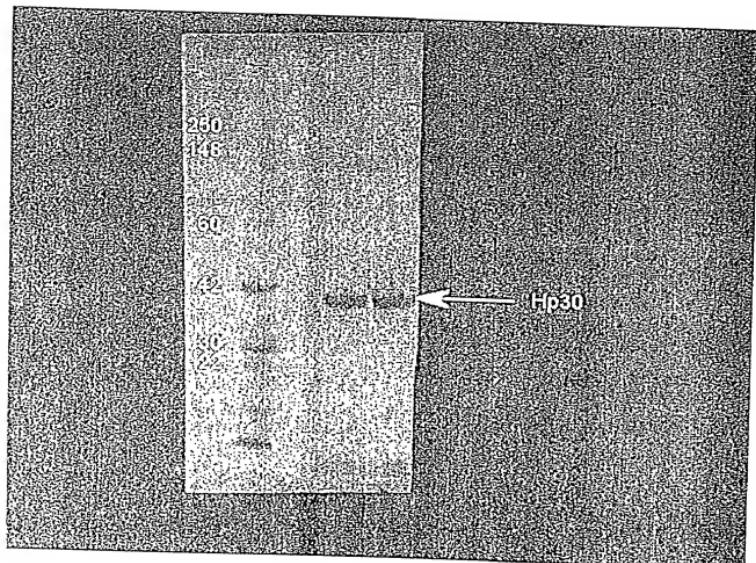


FIG. 3

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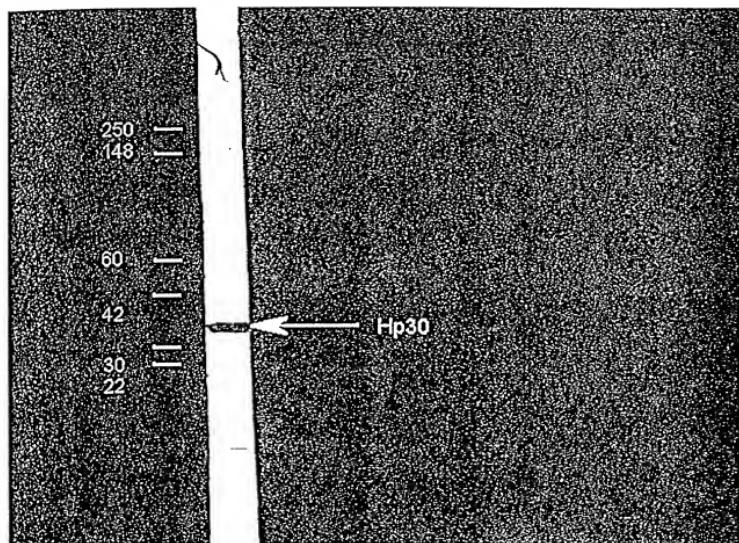


FIG. 4

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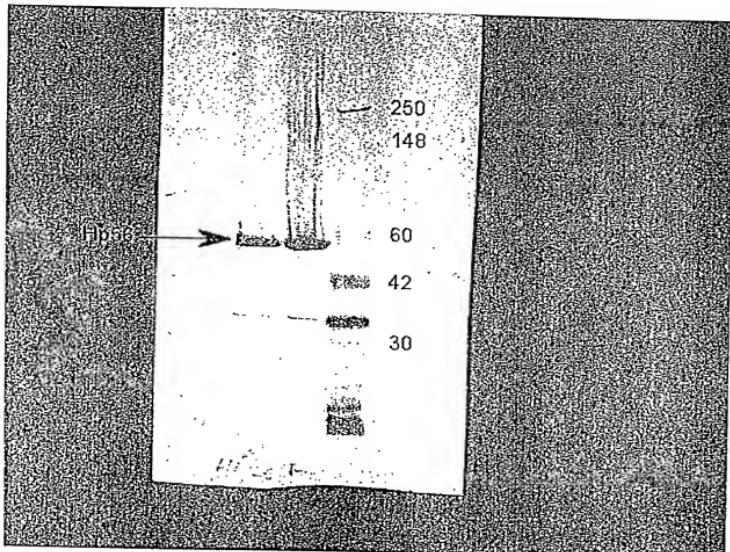


FIG. 5

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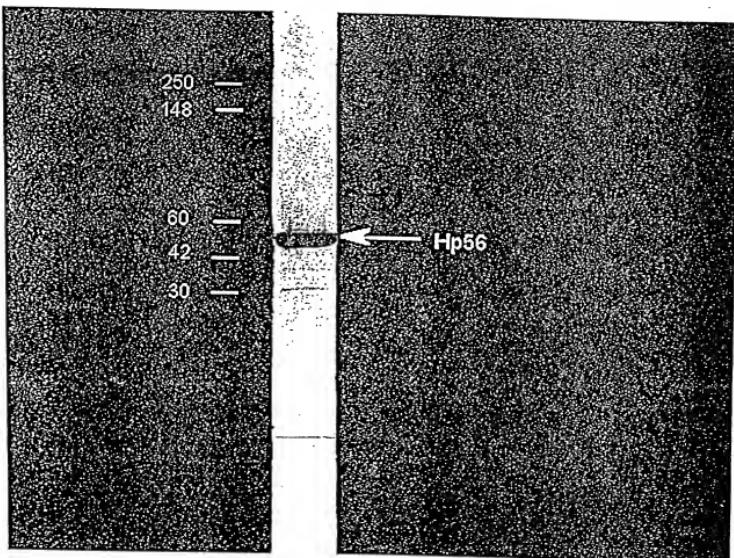


FIG. 6

atg gaa ttg aat caa cca cca ctc cct aca gaa att gat ggt gac gct Met Glu Leu Asn Gln Pro Pro Leu Pro Thr Glu Ile Asp Gly Asp Ala 1 5 10 15	48
tat cat aag ccg agt ttt aat gat ttg ggc tta aaa gaa tcg gtt tta Tyr His Lys Pro Ser Phe Asn Asp Leu Gly Leu Lys Glu Ser Val Leu 20 25 30	96
aaa tcc gtt tat gaa gcc ggc ttc act tcc cca agc ccc att caa gaa Lys Ser Val Tyr Glu Ala Gly Phe Thr Ser Pro Ser Pro Ile Gln Glu 35 40 45	144
aag gcc att ccg gct gtt ttg caa ggc cga gat gtc atc gca caa gcc Lys Ala Ile Pro Ala Val Leu Gln Gly Arg Asp Val Ile Ala Gln Ala 50 55 60	192
caa aca ggc aca gga aaa acc gcc gct ttc gct ctg ccc att atc aac Gln Thr Gly Thr Gly Lys Thr Ala Ala Phe Ala Leu Pro Ile Ile Asn 65 70 75 80	240
aac ctt aaa aac aac cac acc ata gaa gcc cta gtg atc acg ccc acc Asn Leu Lys Asn Asn His Thr Ile Glu Ala Leu Val Ile Thr Pro Thr 85 90 95	288
aga gaa tta gcc atg caa att agc - gat gag att ttc aaa ttg ggc aac Arg Glu Leu Ala Met Gln Ile Ser Asp Glu Ile Phe Lys Leu Gly Lys 100 105 110	336
cac acc agg act aaa acc gtg tgc gtg tat gga ggc cag agc gtt aaa His Thr Arg Thr Lys Thr Val Cys Val Tyr Gly Gly Gln Ser Val Lys 115 120 125	384
aag caa tgc gaa ttc att aag aaa att ccc caa gtg atg atc gct aca Lys Gln Cys Glu Phe Ile Lys Lys Asn Pro Gln Val Met Ile Ala Thr 130 135 140	432
cca gga agg ctg ctc gat cac tta aaa aac gaa cgc atc cat aaa ttt Pro Gly Arg Leu Leu Asp His Leu Lys Asn Glu Arg Ile His Lys Phe 145 150 155 160	480
gtg cct aaa gtg gtc gtt tta gat gaa agc gat gaa atg ctg gat atg Val Pro Lys Val Val Leu Asp Glu Ser Asp Glu Met Leu Asp Met 165 170 175	528
ggg ttt tta gac gat att gaa gag att ttt gac tac ctc cct agc gaa Gly Phe Leu Asp Ile Glu Glu Ile Phe Asp Tyr Leu Pro Ser Glu 180 185 190	576
gcg cag att ttg ctt ttt tca gcc acg atg cca gag cgc att aaa aga Ala Gln Ile Leu Phe Ser Ala Thr Met Pro Glu Pro Ile Lys Arg 195 200 205	624
cta gcg gat aag att tta gaa aac cct att aaa atc cat atc gct cct Leu Ala Asp Lys Ile Leu Glu Asn Pro Ile Lys Ile His Ile Ala Pro 210 215 220	672
tct aat atc act aac acc gac atc acc caa cgc ttt tat gtg atc aat Ser Asn Ile Thr Asn Thr Asp Ile Thr Gln Arg Phe Tyr Val Ile Asn 225 230 235 240	720
gag cat gag agg gcc gaa ggc atc atg cgc ctt tta gac acc cca gca Glu His Glu Arg Ala Glu Ala Ile Met Arg Leu Leu Asp Thr Gln Ala 245 250 255	768
ccc aaa aag agc att gtt ttc acg cgc act aaa aaa gaa gcc gat gaa Pro Lys Lys Ser Ile Val Phe Thr Arg Thr Lys Lys Glu Ala Asp Glu 260 265 270	816

FIG. 7a

ttg cac caa ttc ctt gct tct aaa aat tac aaa agc acc gcc ttg cat	864
Leu His Gln Phe Leu Ala Ser Lys Asn Tyr Lys Ser Thr Ala Leu His	
275 280 285	
ggg gat atg gat caa agg gat cgg cgc tct tct atc atg gcg ttt aaa	912
Gly Asp Met Asp Gln Arg Asp Arg Ser Ser Ile Met Ala Phe Lys	
290 295 300	
aaa aat gac gct gat gtg ttg gtg gct aca gat gtg gcg agt cgt ggg	960
Lys Asn Asp Ala Asp Val Leu Val Ala Thr Asp Val Ala Ser Arg Gly	
305 310 315 320	
cta gat att agc ggt gta agc cat gtg ttt aat tac cac ttg ccc cta	1008
Leu Asp Ile Ser Gly Val Ser His Val Phe Asn Tyr His Leu Pro Leu	
325 330 335	
aac act gag agc tat atc cat cgc atc ggg aga acc ggg cga ggc	1056
Asn Thr Glu Ser Tyr Ile His Arg Ile Gly Arg Thr Gly Arg Ala Gly	
340 345 350	
aaa aaa ggc atg gcg atc act tta gta acc cct tta gaa tac aaa gag	1104
Lys Lys Gly Met Ala Ile Thr Leu Val Thr Pro Leu Glu Tyr Lys Glu	
355 360 365	
ctt tta ccg atg caa aaa gaa att gat tca gag att gaa ctt ttt gaa	1152
Leu Leu Arg Met Gln Lys Ile Asp Ser Glu Ile Glu Leu Phe Glu	
370 375 380	
atc ccc acc att aac gaa aat cag atc atc aaa acc ttg cat gac gct	1200
Ile Pro Thr Ile Asn Glu Asn Gln Ile Ile Lys Thr Leu His Asp Ala	
385 390 395 400	
aaa gtg tct gaa ggg atc atc agc ctt tat gaa cag ctt acc gaa att	1248
Lys Val Ser Glu Gly Ile Ile Ser Leu Tyr Glu Gln Leu Thr Ile	
405 410 415	
ttt gag ccg tct caa ttg gtt tta aaa ctt ttg agt ttg cag ttt gaa	1296
Phe Glu Pro Ser Gln Leu Val Leu Lys Leu Leu Ser Leu Gln Phe Glu	
420 425 430 435	
acc agc aaa att ggc tta aac cag caa gaa att gac gcg att caa aac	1344
Thr Ser Lys Ile Gly Leu Asn Gln Gln Glu Ile Asp Ala Ile Gln Asn	
435 440 445	
ccc aaa gaa aaa acg cca aaa ccc tct aac aaa aaa acg ccc caa cat	1392
Pro Lys Glu Lys Thr Pro Lys Pro Ser Asn Lys Lys Thr Pro Gln His	
450 455 460	
gag cga gcg cgt tct ttc aaa aag ggt cag cac aga gac aga cac cct	1440
Glut Arg Ala Arg Ser Phe Lys Lys Gly Gln His Arg Asp Arg His Pro	
465 470 475 480	
aaa aca aac cat tat tct aaa aaa ccc aaa cgc cgt	1476
Lys Thr Asn His Tyr Ser Lys Lys Pro Lys Arg Arg	
485 490	

FIG. 7b

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atg gca tac aaa tat gat aga gac ttg gaa ttt tta aag caa ttg gaa Met Ala Tyr Lys Tyr Asp Arg Asp Leu Glu Phe Leu Lys Gln Leu Glu 1 5 10 15	48
tct agt gat tta ttg gat ttg ttt gag gtc ctt gtt ttt ggt aaa gac Ser Ser Asp Leu Ieu Asp Ieu Phe Glu Val Leu Val Phe Gly Lys Asp 20 25 30	96
ggc gaa aaa aga cac aat gaa aaa ctg acc agc tcc ata gaa tac aaa Gly Glu Lys Arg His Asn Glu Lys Leu Thr Ser Ser Ile Glu Tyr Lys 35 40 45	144
agg cat ggc gat gat tac gct aaa tac gca gaa aga atc gct gaa gag Arg His Gly Asp Asp Tyr Ala Lys Tyr Ala Glu Arg Ile Ala Glu Glu 50 55 60	192
ttg caa tac tat ggg agc aat agt ttt gcg agt ttc att aaa ggc gaa Leu Gln Tyr Tyr Gly Ser Asn Ser Phe Ala Ser Phe Ile Lys Gly Glu 65 70 75 80	240
gga gtc tta tac aaa gag att tta tgc gat gtg tgc gat aat tta aag Gly Val Leu Tyr Lys Glu Ile Leu Cys Asp Val Cys Asp Lys Leu Lys 85 90 95	288
gtc aat tac aac aag aaa act gaa acg act tta att gaa caa aac atg Val Asn Tyr Asn Lys Lys Thr Glu Thr Thr Leu Ile Glu Gln Asn Met 100 105 110	336
ctt tct aaa atc tta gaa aga agt ttg gaa gaa atg gat gat gaa gaa Leu Ser Lys Ile Leu Glu Arg Ser Leu Glu Glu Met Asp Asp Glu Glu 115 120 125	384
gtg aaa gaa atg tgc gat gaa tta tcc ata aaa aac acg gac aat tta Val Lys Glu Met Cys Asp Glu Leu Ser Ile Lys Asn Thr Asp Asn Leu 130 135 140	432
aac aga caa gcc tta agc ggc ggg act tta acg ctg ttt aaa atg ggg Asn Arg Gln Ala Leu Ser Ala Ala Thr Leu Thr Leu Phe Lys Met Gly 145 150 155 160	480
ggt ttt aaa tct tat caa tta gct gtc att gtt gcg aat ggc gtc gca Gly Phe Lys Ser Tyr Gln Leu Ala Val Ile Val Ala Asn Ala Val Ala 165 170 175	528
aaa acc att cta ggg cgt ggt tta tcg ctt ggc ggc aat cag gtg ctt Lys Thr Ile Leu Gly Arg Gly Leu Ser Leu Ala Gly Asn Gln Val Leu 180 185 190	576
aca aga act ctg agc ttt tta aca ggt cct gtt ggc tgg att acc Thr Arg Thr Leu Ser Phe Leu Thr Gly Pro Val Gly Trp Ile Ile Thr 195 200 205	624
ggc gta tgg aca ggc att gat att gca ggg ccg gct tat agg qta acc Gly Val Trp Thr Ala Ile Asp Ile Ala Gly Pro Ala Tyr Arg Val Thr 210 215 220	672
ata ccg gca tgc att gtg gtt gcc act tta cgc cta aaa aca gag caa Ile Pro Ala Cys Ile Val Val Ala Thr Leu Arg Leu Lys Thr Gln Gln 225 230 235 240	720
gcc aat gga gat aag aag tcg ttg caa ata gaa tcc att Ala Asn Gly Asp Lys Lys Ser Leu Gln Ile Glu Ser Ile 245 250	759

FIG. 8

Protection Against Gastric *H. pylori* Colonization in Mice Conferred by Subcutaneous Immunization with Recombinant Hp30

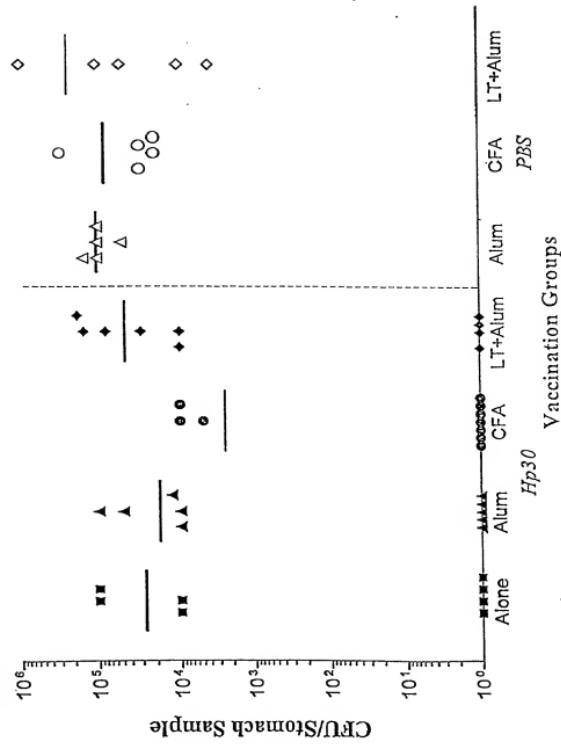


FIG. 9

Protection Against Gastric *H. pylori* Colonization in Mice Conferred by Oral Immunization with *Helicobacter* Lysate or Subunits Vaccine

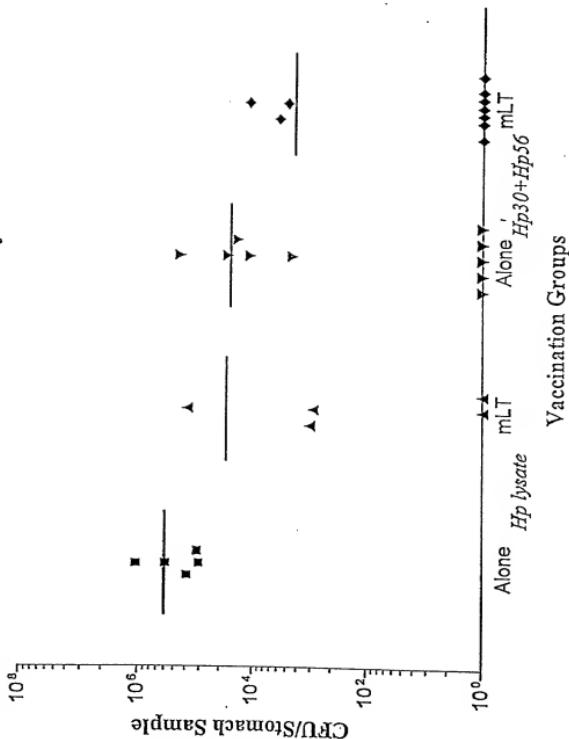


FIG. 10